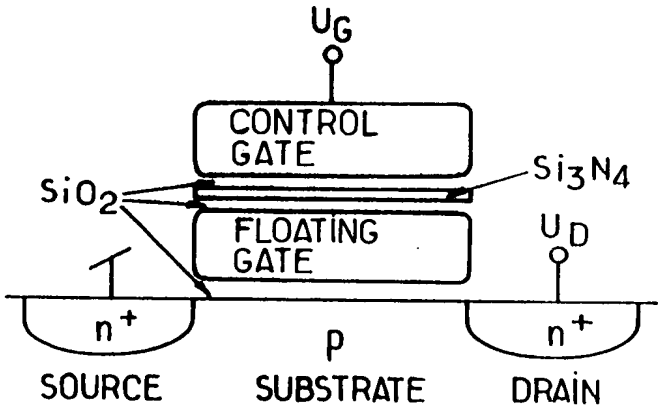

FIG.1a. (PRIOR ART)
SECTION ALONG WIDTH OF THE CHANNEL

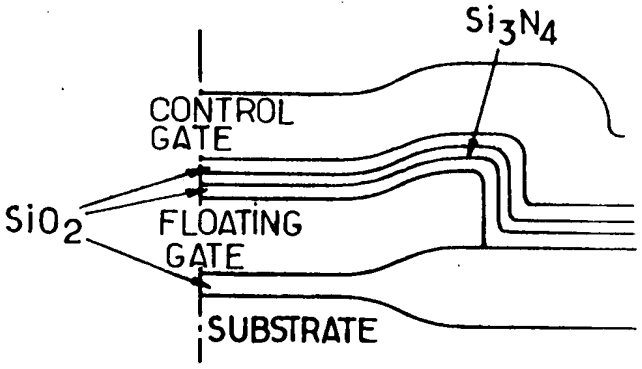

FIG.1b. (PRIOR ART)
1/2 SECTION ALONG LENGHT OF THE CHANNEL

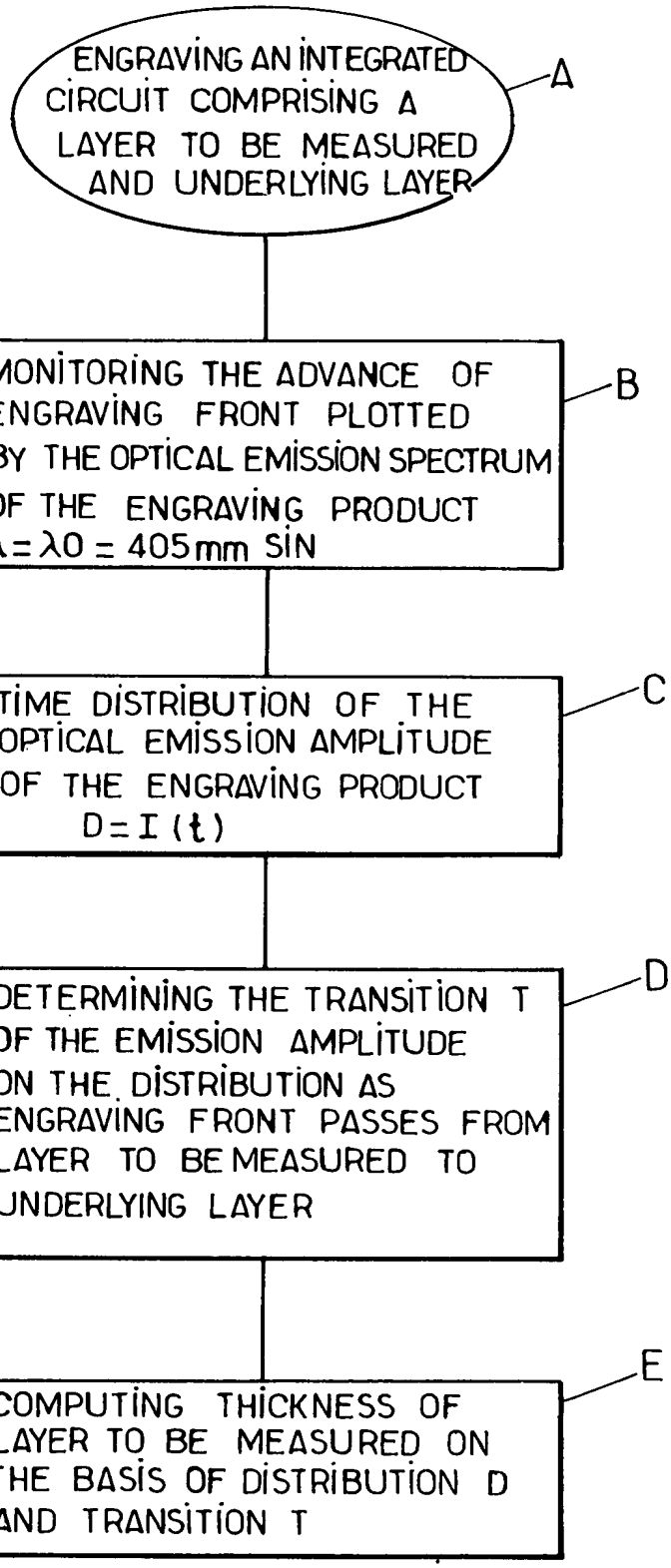
ENGRAVING AN INTEGRATED CIRCUIT COMPRISING A LAYER TO BE MEASURED AND UNDERLYING LAYER
A
MONITORING THE ADVANCE OF ENGRAVING FRONT PLOTTED BY THE OPTICAL EMISSION SPECTRUM OF THE ENGRAVING PRODUCT λ=λ0=405mm SIN
B
TIME DISTRIBUTION OF THE OPTICAL EMISSION AMPLITUDE OF THE ENGRAVING PRODUCT D=I(t)
C
DETERMINING THE TRANSITION T OF THE EMISSION AMPLITUDE ON THE DISTRIBUTION AS ENGRAVING FRONT PASSES FROM LAYER TO BE MEASURED TO UNDERLYING LAYER
D
COMPUTING THICKNESS OF LAYER TO BE MEASURED ON THE BASIS OF DISTRIBUTION D AND TRANSITION T
E

FIG.2.

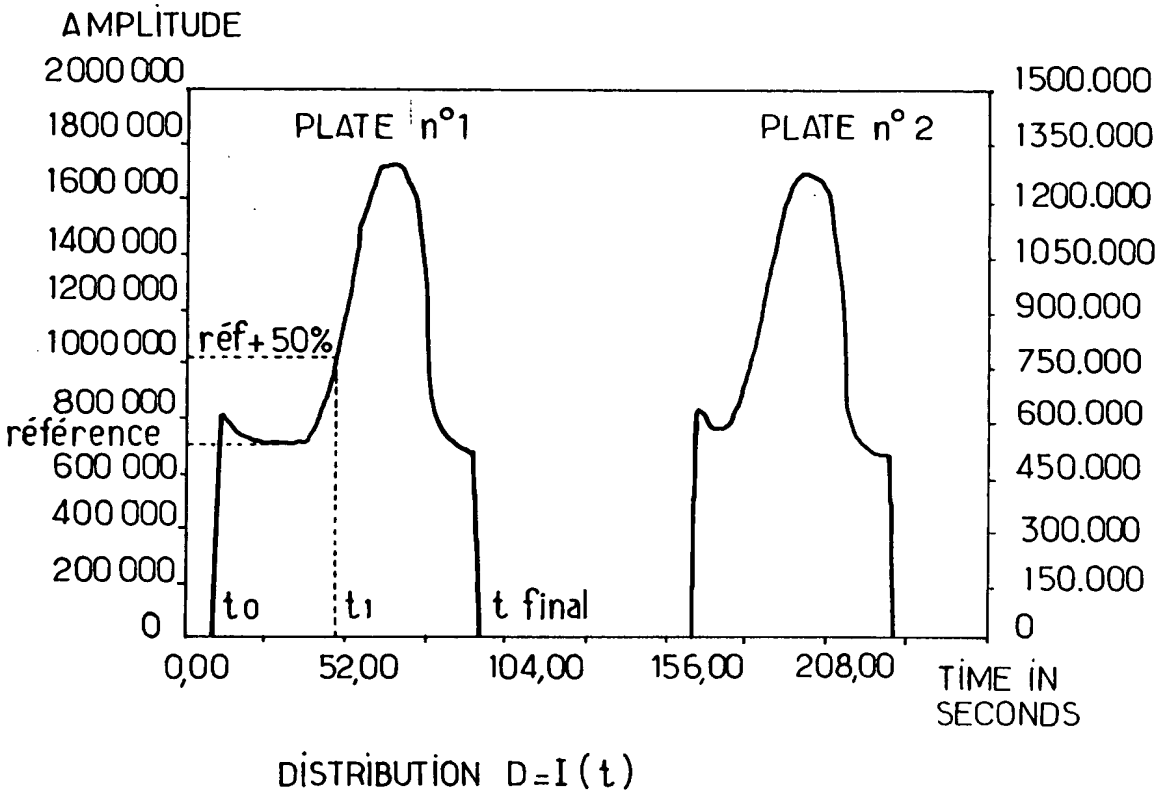
AMPLITUDE
2000 000
1800 000
1600 000
1400 000
1200 000
1000 000
800 000
600 000
400 000
200 000
0
référence
réf+50%
PLATE n°1
PLATE n° 2
to
t1
t final
1500.000
1350.000
1200.000
1050.000
900.000
750.000
600.000
450.000
300.000
150.000
0
0,00
52,00
104,00
156,00
208,00
TIME IN SECONDS
DISTRIBUTION D=I(t)

FIG.3.

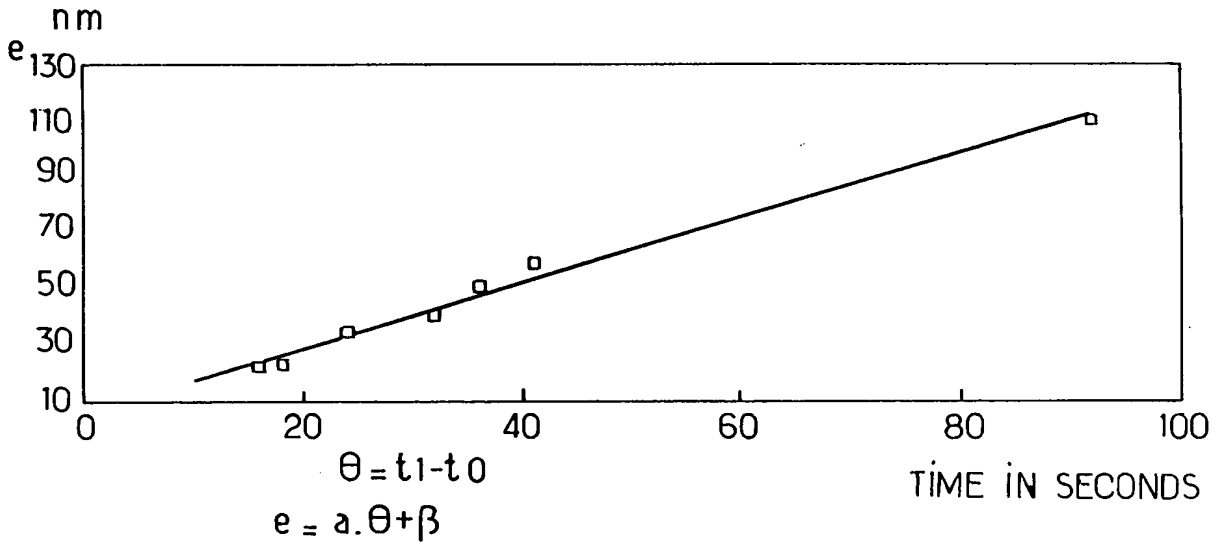
nm
e
130
110
90
70
50
30
10
0
20
40
60
80
100
θ = t1-t0
TIME IN SECONDS
e = a.θ+β

FIG.4.

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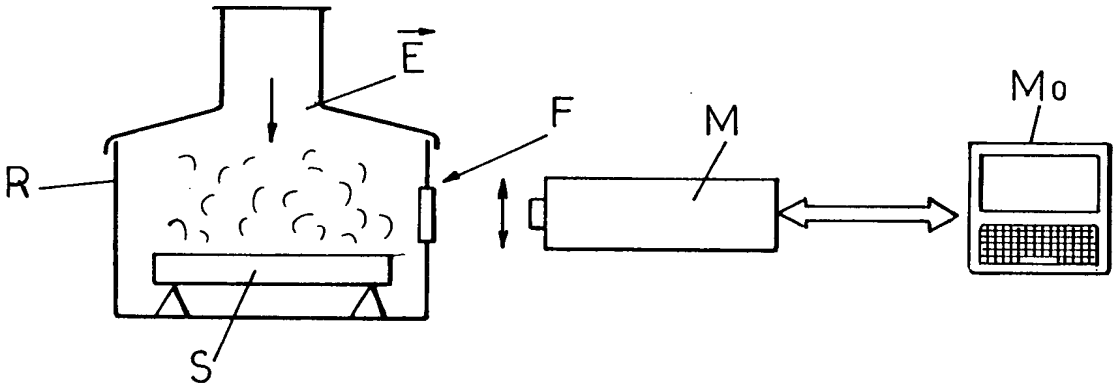

FIG. 5.

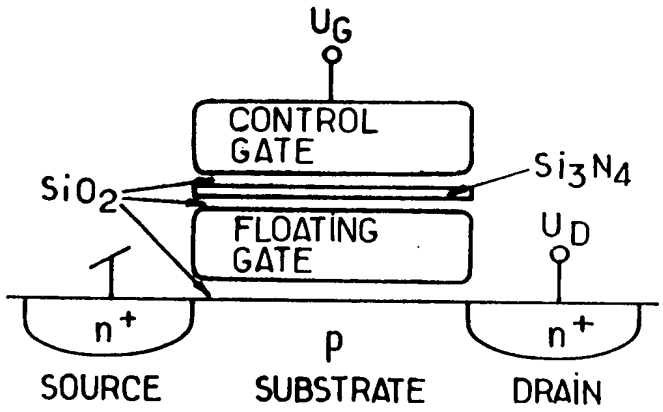

FIG.1a. (PRIOR ART)
SECTION ALONG WIDTH OF THE CHANNEL

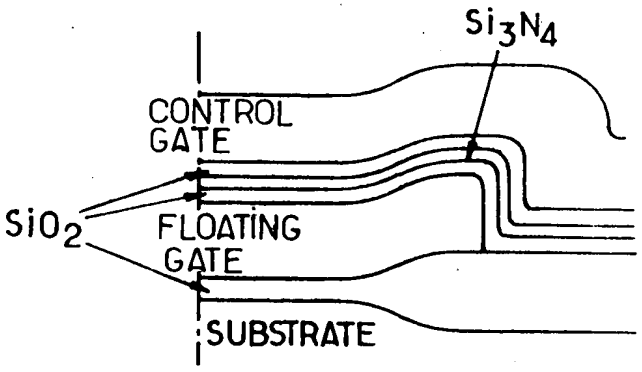

FIG.1b. (PRIOR ART)
1/2 SECTION ALONG LENGHT OF THE CHANNEL

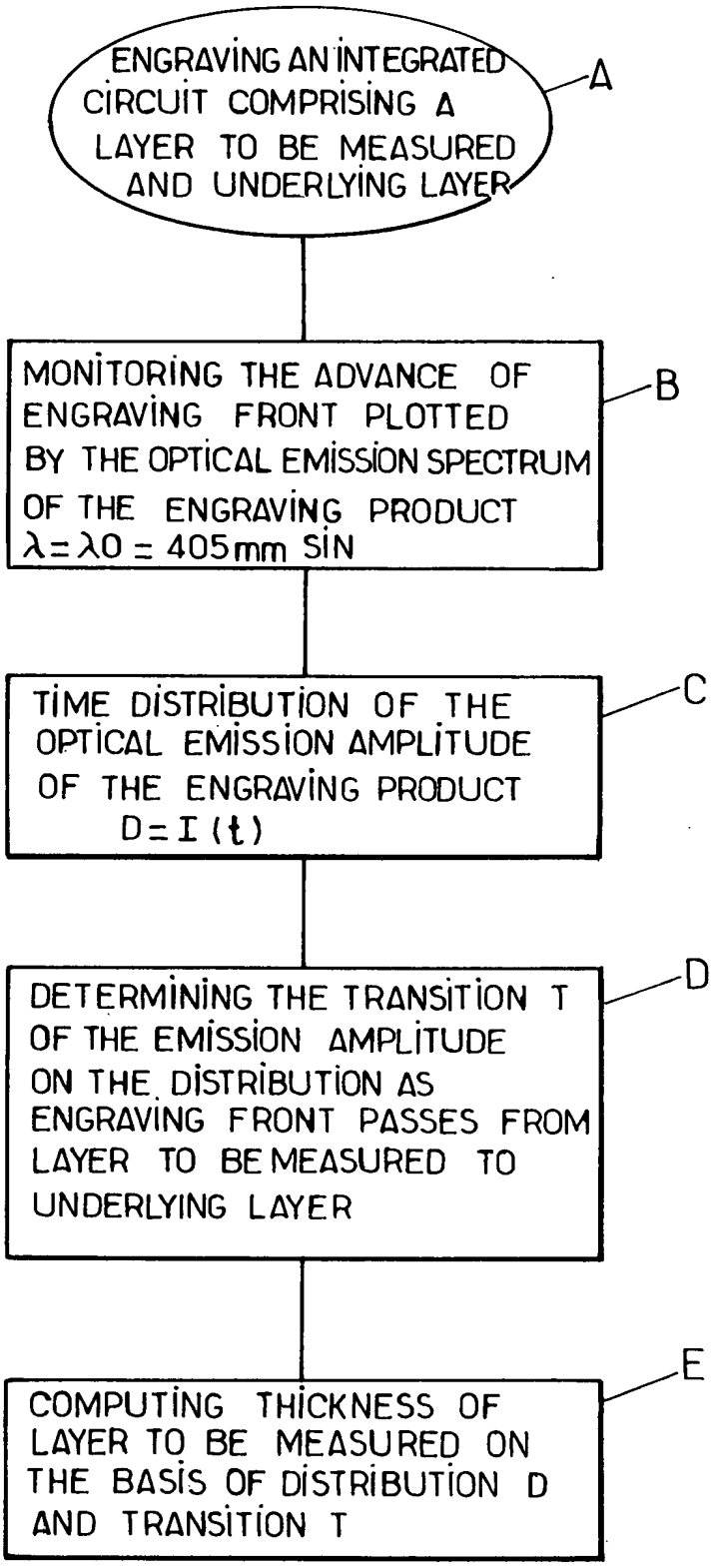
ENGRAVING AN INTEGRATED CIRCUIT COMPRISING A LAYER TO BE MEASURED AND UNDERLYING LAYER
A
MONITORING THE ADVANCE OF ENGRAVING FRONT PLOTTED BY THE OPTICAL EMISSION SPECTRUM OF THE ENGRAVING PRODUCT λ=λ0 = 405mm SIN
B
TIME DISTRIBUTION OF THE OPTICAL EMISSION AMPLITUDE OF THE ENGRAVING PRODUCT D=I(t)
C
DETERMINING THE TRANSITION T OF THE EMISSION AMPLITUDE ON THE DISTRIBUTION AS ENGRAVING FRONT PASSES FROM LAYER TO BE MEASURED TO UNDERLYING LAYER
D
COMPUTING THICKNESS OF LAYER TO BE MEASURED ON THE BASIS OF DISTRIBUTION D AND TRANSITION T
E

FIG. 2.

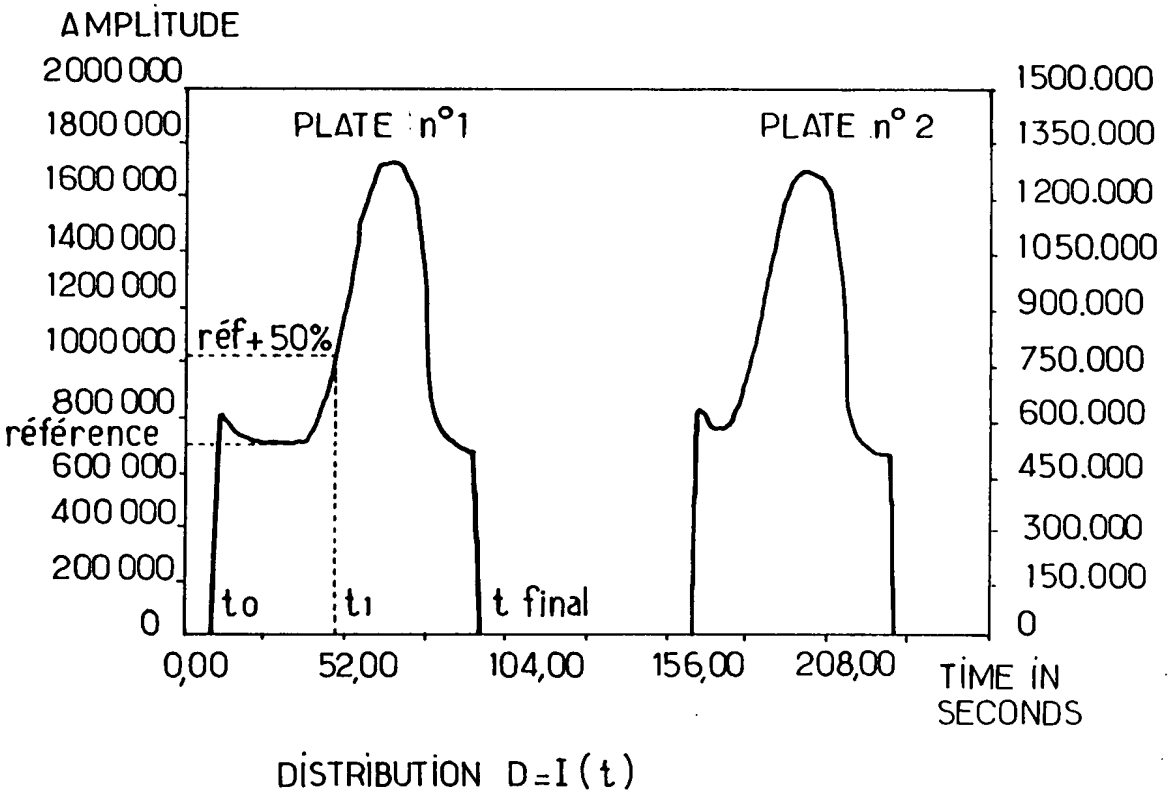
AMPLITUDE
2000 000
1800 000
1600 000
1400 000
1200 000
1000 000
800 000
référence
600 000
400 000
200 000
0
1500.000
1350.000
1200.000
1050.000
900.000
750.000
600.000
450.000
300.000
150.000
0
PLATE n°1
PLATE n° 2
réf+50%
to
t1
t final
0,00
52,00
104,00
156,00
208,00
TIME IN SECONDS
DISTRIBUTION D=I(t)

FIG.3.

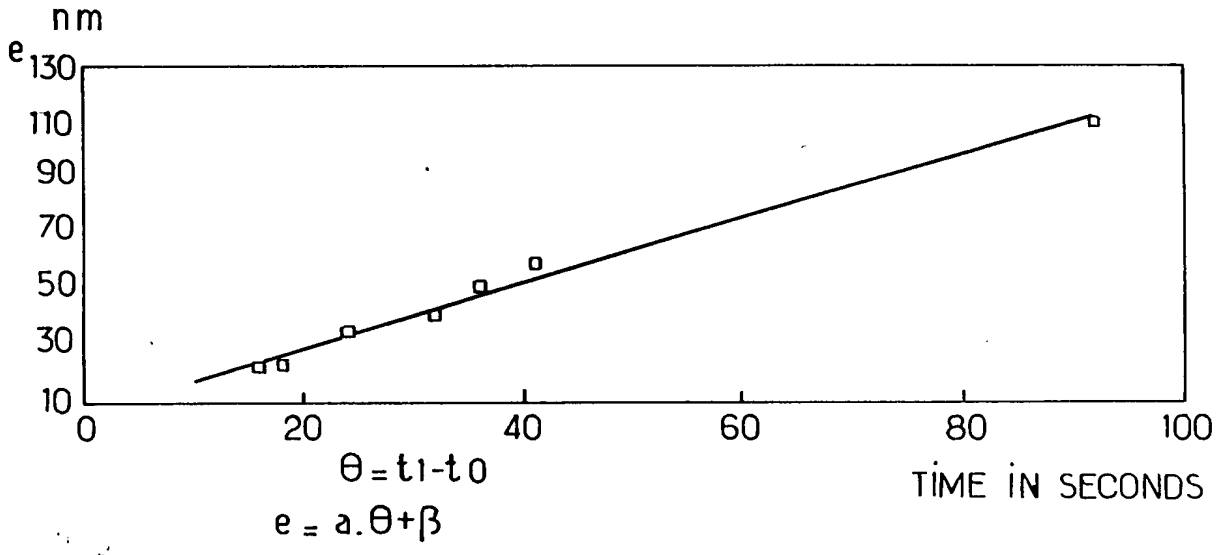
nm
e
130
110
90
70
50
30
10
0
20
40
60
80
100
θ = t1-t0
TIME IN SECONDS
e = a.θ+β

FIG.4.

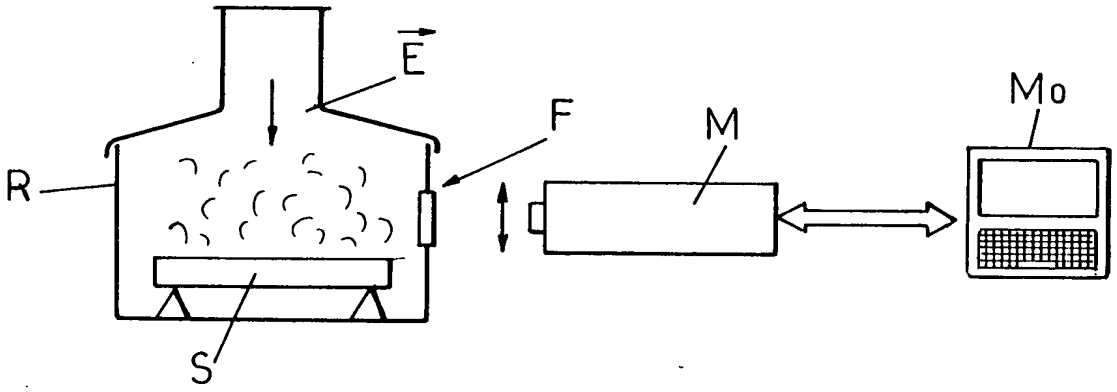

FIG. 5.